Notes on Siphonaptera

by

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Ctenophthalmus calceatus Waterston.

Ctenophthalmus calceatus **Waterston 1912: Ent. Mon. Mag., 2nd ser., 23:27.**
Ctenophthalmus calceatus septentrionalis **de Meillon 1940: J. Ent. Soc. S. Afr. 3:62.**

Ctenophthalmus is represented by a solitary species, *calceatus*, in South Africa, whereas the genus is very rich in Central Africa. One might infer from this that it is a tropical genus were it not that it is well represented in the Palæarctic Region. In South Africa *calceatus* is rare, but widely distributed, and I have specimens from the Transkei, Grahamstown and Port Alfred in the Cape Province; Maritzburg and Donnybrook in Natal; Heilbron, Harrismith and Clarens in the Orange Free State; Johannesburg, Bethal, Lake Chrissie and Haenertsburg in the Transvaal; and Bulawayo and Gwelo in Southern Rhodesia. This distribution is largely confined to the eastern half of Southern Africa and it may be that it is high rainfall and not temperature that favours the genus.

In the southern part of its range, male *calceatus* (Fig. 1 d) have the typical short and broadly rounded movable process of the clasper and the female a neat triangular excavation in the 7th sternite. As one approaches the Transvaal this process in the male becomes more pointed towards the apex, and this led the writer to describe it as a sub-species *calceatus septentrionalis*. Going further north into Southern Rhodesia, the male process and female sternite are practically indistinguishable from *cabirus* J. & R. 1913 (Fig. 1 e), an eastern tropical species, found in the Congo, Uganda and Kenya. In the Katanga province of the Congo *ansorgei katanganus* Jordan 1936 (Fig. 1 f) links up *cabirus* with *ansorgei ansorgei* Roths 1907 (Fig. 1 g), which has an elongated and much pointed movable process in the male.

The position is then that typical *calceatus* from the Cape Province, *cabirus* from East Africa and *ansorgei ansorgei* from Angola are easily recognizable. Between these extremes, however, one finds intermediate specimens in the Transvaal and Southern Rhodesia which cannot be placed with certainty. Occasionally an extreme form appears outside its normal range, and I have what appears to be *ansorgei ansorgei* from Natal (Fig 1 g). The problem is whether to lump all these species under the oldest name, in this case *ansorgei ansorgei*, to degrade the different species to sub-species, or to leave matters as they are. It is possible that a solution will be more easily reached when more is known about the fauna of Angola, Northern Rhodesia and Moçambique, and for this reason I am making no changes

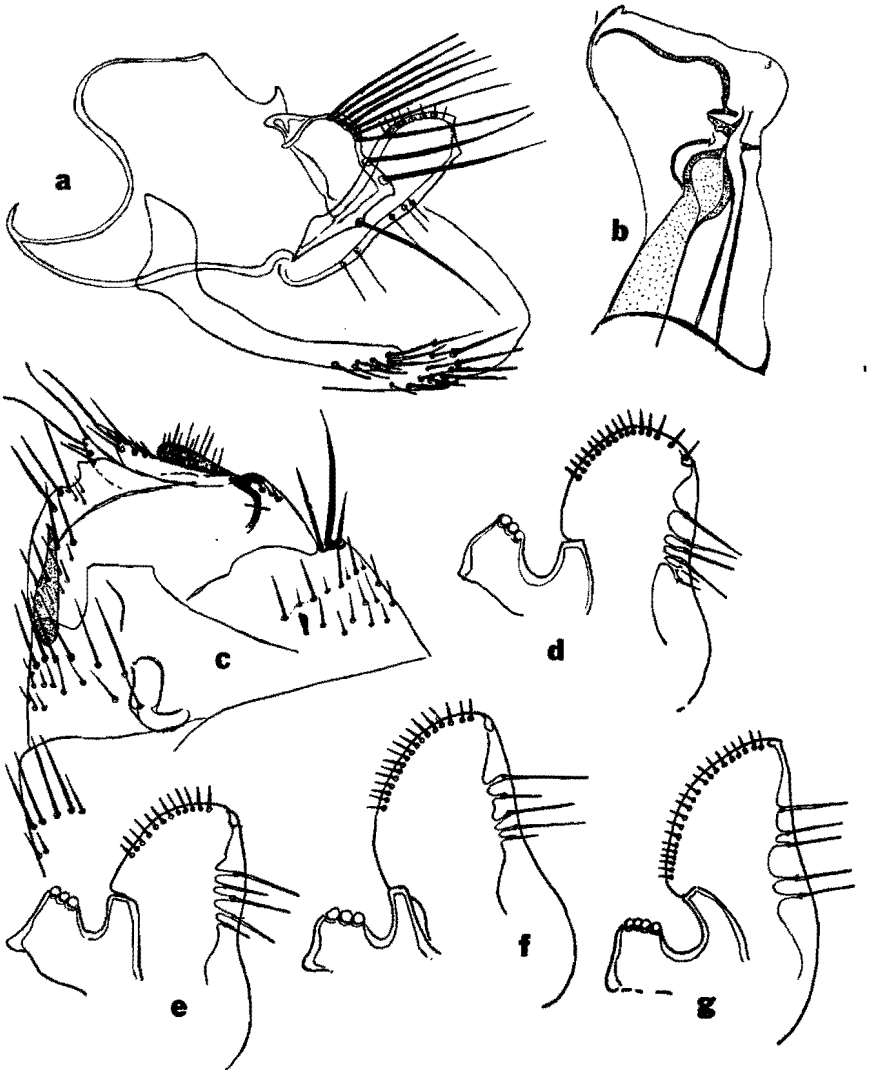

Figure 1. *Ctenophthalmus smithersi* sp. nov. *a*, male terminalia. *b*, male phallosome. *c*, terminal abdominal segments of female. Movable process of the clasper in *d, Ct. calceatus. e, Ct. cabirus. f, Ct. ansorgei katanganus. g, Ct. ansorgei ansorgei.*

in the nomenclature except to sink *calceatus septentrionalis* as a synonym of *calceatus*. In the meantime, one is greatly puzzled by specimens from Southern Rhodesia which are intermediate between *calceatus* and *cabirus*. For the present I am calling these specimens *calceatus*.

As far as the female of these species is concerned there is nothing by which they may be separated. The upper lobe of the incision in sternite 7 may have a straight lower border as in typical *calceatus*, or the lower border may be convex as is commonly seen in *cabirus*. There is so much variation between these extremes, however, even in specimens from the same animal collected at the same time, that it is quite unreliable.

Ctenophthalmus smithersi sp. nov. (Fig. 1 a, b, c).

This species is related to *cophurus* Jordan & Rothschild, *debrauweri* Berteaux, *luberensis* Berteaux, and *vanhoofi* Berteaux. These species all differ from other African *Ctenophthalmus* in having processes Pi and Pii of the clasper fused. The male differs from *cophurus, debrauweri* and *vanhoofi* but not *luberensis* in having a row of about nine long and strong bristles along the dorsal edge of the fused Pi and Pii and in the shape of the movable process of the clasper. The greatly expanded paramere is also characteristic of the new species, and this character plus the shape of the movable process of the clasper immediately distinguishes it from *luberensis*.

Male. Eye poorly pigmented, labial palp extending to the apical third of the fore coxa. Mesonotum with two rows of bristles. Sternite 8 with eleven to twelve bristles on each side; of these the four distal ones are longer and stronger than the others. Sternite 9 of about even width to the expanded base, gently curved and hence not sharply divided into vertical and horizontal arms, the apex with a few short bristles. Fixed process of the clasper enlarged and without a sinus dividing the two processes, dorsal edge with a closely set row of nine to ten long bristles. Movable process long and narrow, but expanded near the apex. Lamina of the phallosome narrow, of almost even width throughout, gently curved, the apex sharply turned up; dorsal sclerite of the capsule convex. Mantle of the phallosome enlarged with its ventral proximal angle and vertical margin sclerotized.

Female. Eye and length of the labial palp as in the male. Mesonotum with a few additional bristles laterally and hence appearing to have three rows. Sternite 7 with seventeen bristles, six of these strong and arranged in a sub-marginal row; distal margin with a shallow sinus, the upper lobe greatly enlarged and truncated and the lower lobe small and rounded. Sternite 7, or possibly tergite 8, with a narrow curved sclerite on each side. Sternite 8 pigmented, club-shaped and pointed apically. Tergite 8 with sixteen lateral bristles, of which three marginal and two sub-marginal are long and strong. Spermatheca with the head about as long as the tail. Type ♂, paratypes one ♂ and one ♀ off *Crocidura lunata* Dollman, Vumba, Umtali, Southern Rhodesia, Jan., 1949 (Coll. National Museum, Southern Rhodesia). Type and paratypes in the collection of the South African Institute for Medical Research, Johannesburg.

This species is named in honour of Mr. R. Smithers, Director of the

National Museum, Southern Rhodesia. Mr. Smithers has been responsible for organizing a Flea Survey of Southern Rhodesia, and the fauna is now tolerably well known.

Tristan da Cunha.

There appear to be no records of Siphonaptera from Tristan da Cunha. In 1948, Dr. G. J. Broekhuysen, of the Department of Zoology, University of Cape Town, visited the island and made a small collection. I am indebted to him for sending the specimens to me and to Dr. K. Jordan and Mr. G. H. E. Hopkins, of the Zoological Museum, Tring, for information about the island's fauna.

1. *Ctenocephalides canis* (Curtis). 1 ♀ from a dog. Jan., 1948. Tristan da Cunha.
   This is the European dog flea and not very common in South Africa, where its place is taken by *Ct. felis strongylus* Jordan. I have specimens from Cape Town, however, and it may have been transported to the island from there.
2. *Pulex irritans* Linne. 4 ♂♂, 3 ♀♀ from a dog. Jan., 1948. Tristan da Cunha.
3. *Nosopsyllus londiniensis* (Rothschild). 1 ♂, 3 ♀♀ off a domestic rat. Feb., 1948. Cave Point, Tristan da Cunha.
   This flea, a parasite of domestic rodents, is widely distributed in Europe and is also known from the United States of America, South America, Australia and South Africa.